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The USPTO production files are current through: May 25,1999 for U.S. Patent Text Data.

May 25,1999 for U.S. Current Classification Data.

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FILE 'USPAT' ENTERED AT 15:59:10 ON 25 MAY 1999

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U. S.
                    PATENT
                                    TEXT
      THE WEEKLY PATENT TEXT AND IMAGE DATA IS CURRENT
      THROUGH May 25, 1999.
 => s 424/59/ccls
 L1·
           1411 424/59/CCLS
 => s l1 and (sulphonic acid or sulphonate?)
          14319 SULPHONIC
         458603 ACID
          11314 SULPHONIC ACID
                  (SULPHONIC (W) ACID)
          12559 SULPHONATE?
L2
            125 L1 AND (SULPHONIC ACID OR SULPHONATE?)
=> s 12 and (polyglyceryl or diglyceryl or triglyceryl or tetraglyceryl or
isolan ci or lameform tgi or hostacerin dgi or dehymuls pgph)
           343 POLYGLYCERYL
           164 DIGLYCERYL
           132 TRIGLYCERYL
            38 TETRAGLYCERYL
            126 ISOLAN
         22389 CI
              0 ISOLAN CI
                  (ISOLAN(W)CI)
            18 LAMEFORM
           205 TGI
             2 LAMEFORM TGI
                  (LAMEFORM (W) TGI)
            29 HOSTACERIN
            43 DGI
             0 HOSTACERIN DGI
                  (HOSTACERIN(W)DGI)
            36 DEHYMULS
             3 PGPH
             0 DEHYMULS PGPH
                  (DEHYMULS (W) PGPH)
L3
            20 L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TETRAG
LYC
               ERYL OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHY
MUL
               S PGPH)
=> s 12 and (polyglyceryl or diglyceryl or triglyceryl or tetraglyceryl or
isolan or lameform or hostacerin or dehymuls)
           343 POLYGLYCERYL
           164 DIGLYCERYL
           132 TRIGLYCERYL
            38 TETRAGLYCERYL
           126 ISOLAN
            18 LAMEFORM
            29 HOSTACERIN
            36 DEHYMULS
L4
            22 L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TETRAG
LYC
```

ERYLOR ISOLAN OR LAMEFORM OR HOSTA IN OR DEHYMULS)

=> s 14 and (tiovei, or ((hydrophobic? or coated)(2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment

UNMATCHED LEFT PARENTHESIS '2A) (TITANIUM'

=> s 14 and (tioveil or ((hydrophobic? or coated)(2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?)

UNMATCHED LEFT PARENTHESIS 'OR ((HYDROPHOB' YOU HAVE RECEIVED THIS ERROR MESSAGE 2 CONSECUTIVE TIMES The number of right parentheses in a query must be equal to the number of left parentheses.

IF YOU REQUIRE FURTHER HELP, PLEASE CONTACT YOUR LOCAL HELP DESK => s 14 and (tioveil or ((hydrophobic? or coated)(2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?))

UNMATCHED LEFT PARENTHESIS 'AND (TIOVEIL'

=> s 14 and (tioveil or ((hydrophobic? or coated)(2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?)))

25 TIOVEIL 56036 HYDROPHOBIC? 317718 COATED 127908 TITANIUM 166010 DIOXIDE 34796 TITANIUM DIOXIDE (TITANIUM(W)DIOXIDE) 137524 ZINC 325625 OXIDE 32024 ZINC OXIDE (ZINC(W)OXIDE) 542 TIO2 14082 ZNO 181130 INORGANIC 99022 PIGMENT? 7644 INORGANIC PIGMENT? (INORGANIC (W) PIGMENT?)

1493 (HYDROPHOBIC? OR COATED) (2A) (TITANIUM DIOXIDE OR ZINC OXID

E O

R TIO2 OR ZNO OR INORGANIC PIGMENT?)

1 L4 AND (TIOVEIL OR ((HYDROPHOBIC? OR COATED)(2A) (TITANIUM L5 DIO

XIDE OR ZINC OXIDE OR TIO2 OR ZNO OR INORGANIC PIGMENT?)))

=> d 15 cit a

'A' IS NOT A VALID FORMAT FOR FILE 'USPAT' ENTER DISPLAY FORMAT (CIT):cit ab

1. 5,188,831, Feb. 23, 1993, Sunscreens containing both water and oil dispersible titanium dioxide particles; Gregg A. Nicoll, et al., 424/401, **59**, 63, 69 [IMAGE AVAILABLE]

US PAT NO:

5,188,831 [IMAGE AVAILABLE]

L5: 1 of 1

# ABSTRACT:

A composition for topical application to human skin to provide protection from excessive exposure to ultra-violet rays, comprises an effective amount of a sunscreen comprising water-dispersible ultrafine titanium dioxide and oil-dispersible ultrafine titanium dioxide, together with a cosmetically acceptable vehicle for the sunscreen.

US PAT NO: 5,188,831 [IMAGE AVAILABLE]

US-CL-CURRENT: 424/401, 59, 63, 69

SUMMARY:

BSUM (76)

Amerchol Corp.

Octyl methoxycinnamate

PARSOL MCX Bernel Chemical

Octyl salicylate SUNAROME WMO

Felton Worldwide

L5: 1 of 1

PABA PABA National Starch

2-Phenylbenzimidazole-5-sulphonic acid

EUSOLEX 232 EM Industries

SUNAROME W Felton Worldwide

3-(4-methylbenzylidene)-camphor

EUSOLEX 6300

EM Industries

Benzophenone-1

TEA salicylate

UVINUL.

DETDESC:

DETD(20)

Ingredients	% w/w
cetyl dimethicone copoly	/ol
cetyl dimethicone	_
<pre>polyglyceryl-3-oleate * hexyl laurate</pre>	5
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (water-	dispersible)
	2.5

# CLAIMS:

# CLMS(1)

We.

an effective amount of a sunscreen comprising a mixture of water-dispersible titanium dioxide exhibiting a hydrophilic surface and an oil-dispersible titanium dioxide exhibiting a hydrophobic surface, each of said titanium dioxides having an average particle size of less than 100 nm in total amount said. . .

=> his

'HIS' IS NOT A RECOGNIZED COMMAND

=> d his

L1

L2

```
(FILE 'USPAT' ENTERED AT 15:59:10 ON 25 MAY 1999)
1411 S 424/59/CCLS
125 S L1 AND (SULPHONIC ACID OR SULPHONATE?)
```

L3 20 S L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TET

```
RAG
                    AND (POLYGLYCERYL OR DIGLYCERY R TRIGLYCERYL OR TET
 L4
 RAG
L5
               1 S L4 AND (TIOVEIL OR ((HYDROPHOBIC? OR COATED)(2A) (TITANI
UM
=> s 14 and (titanium dioxide or inorganic pigment? or zinc oxide or tio2 or
zno)
         127908 TITANIUM
         166010 DIOXIDE
         34796 TITANIUM DIOXIDE
                  (TITANIUM(W)DIOXIDE)
        181130 INORGANIC
         99022 PIGMENT?
          7644 INORGANIC PIGMENT?
                  (INORGANIC (W) PIGMENT?)
        137524 ZINC
        325625 OXIDE
         32024 ZINC OXIDE
                  (ZINC(W)OXIDE)
           542 TIO2
         14082 ZNO
L6
            18 L4 AND (TITANIUM DIOXIDE OR INORGANIC PIGMENT? OR ZINC OXID
E O
               R TIO2 OR ZNO)
=> s 16 and (coated or hydrophobic? or water-resistan? or waterproof?)
        317718 COATED
         56036 HYDROPHOBIC?
        749246 WATER
        636838 RESISTAN?
         16549 WATER-RESISTAN?
                  (WATER (W) RESISTAN?)
         18347 WATERPROOF?
L7
            14 L6 AND (COATED OR HYDROPHOBIC? OR WATER-RESISTAN? OR WATERP
ROO
               F?)
=> d 17 cit ab
1. 5,876,702, Mar. 2, 1999, Cosmetic and dermatological light protection
formulations in the form of O/W macroemulsions, O/W microemulsions or
O/W/O emulsions; Heinrich Gers-Barlag, et al., 424/59, 60, 400, 401;
514/937, 938, 939 [IMAGE AVAILABLE]
US PAT NO:
               5,876,702 [IMAGE AVAILABLE]
                                                        L7: 1 of 14
```

O/W macroemulsions or O/W microemulsions or O/W/O emulsions having a content of dissolved UV filter substances which are sparingly soluble per se in oil components, in particular 4,4',4"-(1,3,5-triazine-2,4,6triyltriimino) tris-benzoic acid tris (2-ethylhexyl ester), obtainable by phase inversion technology.

=> d 17 kwic

5,876,702 [IMAGE AVAILABLE] US PAT NO: L7: 1 of 14 US-CL-CURRENT: 424/59, 60, 400, 401; 514/937, 938, 939

, SUMMARY:

Other sparingly soluble UV filter substances are also known, for example 2-phenylbenzimidazole-5-sulphonic acid and its salts, in particular the sodium, potassium and TEA salt, for example obtainable under the name Eusolex.RTM. 232 from. . .

# SUMMARY:

# BSUM(31)

Hydrophilic emulsifiers (with high HLB values) are as a rule O/W emulsifiers. Accordingly, **hydrophobic** or lipophilic emulsifiers (with low HLB values) are as a rule W/O emulsifiers.

#### DETDESC:

# DETD(6)

in . . . a UV filter substance which is sparingly soluble per se in oil components, in particular 4,4',4"-(1,3,5-triazine-2,4,6-triyl-triimino)-tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-sulphonic acid or its salts, is present in dissolved form, and

#### DETDESC:

#### DETD(12)

According . . . filter substances which are sparingly soluble per se in oil components, in particular of 4,4',4"-(1,3,5-triazine-2,4,6-triyltri-imino)tris-benzoic acid tris(2-ethylhexyl ester) and/or of 2-phenylbenzimidazole-5-sulphonic acid or its salts, i.e. typically about 5% by weight, based on the total weight of an O/W microemulsion or an. . .

#### DETDESC:

# DETD(13)

An . . . UV filter substances which are sparingly soluble per se in oil components, in particular of 4,4',4"-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-sulphonic acid or its salts, into emulsions, in particular O/W emulsions, O/W microemulsions or O/W/O emulsions, characterized in that

# DETDESC:

# DETD(20)

UV filter substances which are sparingly soluble per se in oil components, in particular 4,4',4"-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-sulphonic acid and its salts,

#### DETDESC:

# DETD (75)

Triglyceryl diisostearate (nomenclature analogous to CTFA: polyglyceryl 3-diisostearate), isostearyldiglyceryl succinate, diglyceryl sesquiisostearate (nomenclature analogous to CTFA: polyglyceryl 2-sesquiisostearate), triglyceryl polyhydroxystearate (nomenclature analogous to CTFA: polyglyceryl 2-polyhydroxystearate) are also advantageous.

```
DETDESC:
 DETD(88)
  UV filter substances which are sparingly soluble per se in oil
   components, in particular 4,4',4"-(1,3,5-triazine-2,4,6-
   triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or
   2-phenylbenzimidazole-5-sulphonic acid and its salts,
 DETDESC:
 DETD(113)
  salts of 2-phenylbenzimidazole-5-sulphonic acid, such as its
   sodium, potassium or its triethanolammonium salt, and the sulphonic
   acid itself;
 DETDESC:
 DETD (114)
  sulphonic acid derivatives of benzophenones, preferably
   2-hydroxy-4-methoxybenzophenone-5-sulphonic acid and salts
   thereof;
 DETDESC:
DETD (115)
 sulphonic acid derivatives of 3-benzylidenecamphor, such as, for
  example, 4-(2-oxo-3-bornylideneirethyl)-benzenesulphonic acid,
  2-methyl-5-(2-oxo-3-bornylidenemethyl) benzenesulphonic acid and salts
  thereof.
DETDESC:
DETD (119)
 Cosmetic . . . and/or other metal compounds which are sparingly
soluble or insoluble in water, in particular the oxides of titanium
(TiO.sub.2), zinc (ZnO), iron (for example Fe.sub.2 O.sub.3),
zirconium (ZrO.sub.2), silicon (SiO.sub.2), manganese (for example MnO),
aluminum (Al.sub.2 O.sub.3) or cerium (for example.
DETDESC:
DETD (120)
 It is particularly advantageous in the context of the present invention,
although not absolutely necessary, if the inorganic pigments are
present in a hydrophobic form, i.e. they have been given a
water-repellent treatment on the surface. This surface treatment can
comprise providing the pigments with a thin hydrophobic layer by
processes known per se.
DETDESC:
DETD (121)
 Such a process comprises, for example, a procedure in which the
hydrophobic surface layer is produced by a reaction according to n
TiO.sub.2 +m (RO).sub.3 Si--R'.fwdarw.n TiO.sub.2 (surface). n and m
here. .
DETDESC:
DETD (125)
```

Those . . advantageously additionally comprise at least one further

UVA filter and/or at least one further UVB filter are or at least one inorganic pigment. eferably an inorganic micropid t.

DETDESC:

DETD (128)

The . . . resin acid, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid and derivatives thereof, mannose and derivatives thereof, zinc and derivatives thereof (for example **ZnO**, ZnSO.sub.4), selenium and derivatives thereof (for example selenium methionine), stilbenes and derivatives thereof (for example stilbene oxide, trans-stilbene oxide) and . . .

DETDESC:

DETD (139)

The cosmetic or dermatological light protection formulations advantageously comprise **inorganic pigments**, in particular micropigments, for example in amounts of 0.1% by weight to 30% by weight, preferably in amounts of 0.5%. . .

CLAIMS:

CLMS(1)

We

filter substance which is sparingly soluble in oil components and selected from the group consisting of 4,4',4"-(1,3,5-triazine-2,4,6-triyl-triimino)-tris-benzoic acid tris(2-ethylhexyl ester), 2-phenylbenzimidazole-5-sulphonic acid, mixtures thereof and its salts, is present in dissolved form, and at least one emulsifier (emulsifier A) having the following. . .

CLAIMS:

CLMS(2)

2. . . and alkenyl esters having carbon chains of 4-24 carbon atoms, monoglycerol monocarboxylic acid monoesters, di- and triglycerol monocarboxylic acid monoesters, triglyceryl monocarboxylic acid monoesters, triglyceryl diisostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiisostearate, triglyceryl polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, methicone copolyols, cyclomethicone copolyols, alkylmethicone copolyols, laurylmethicone copolyol, cetyldimethicone copolyol, branched or unbranched alkylmonocarboxylic. . .

CLAIMS:

CLMS(3)

3. . . . one emulsifier selected from the group consisting of sorbitan stearate, sorbitan oleate, glycerylsorbitan stearate, sucrose monostearate, sucrose monolaurate, sucrose palmitate, triglyceryl diisostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiisostearate, triglyceryl polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, stearic acid, oleic acid, succinic acid, hexanoic acid (caproic acid), heptanoic acid (oenanthic acid), . .

CLAIMS:

CLMS (12)

which are sparingly soluble per se in oil components and selected from the group consisting of 4,4',4"-(1,3,5-triazine-2,4,6-triyltriimino)-tris-benzoic acid tris(2-ethylhexyl ester), 2-phenylbenzimidazole-5-sulphonic acid, mixtures thereof and its salts, and optionally, further emulsifier substances which are soluble or dispersible in the oily phase, which do.

# CLAIMS:

CLMS (14)

14. . . . carbon chains of 4-24 carbon atoms, monoglycerol monocarboxylic acid monoesters, di- and triglycerol monocarboxylic acid monoesters, triglycerol monocarboxylic acid monoesters, triglyceryl dissostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiisostearate, triglyceryl polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, methicone copolyols, cyclomethicone copolyols, alkylmethicone copolyols, laurylmethicone copolyol, cetyldimethicone copolyol, branched or unbranched alkylmonocarboxylic. . .

## CLAIMS:

CLMS (15)

15. . . . one emulsifier selected from the group consisting of sorbitan stearate, sorbitan oleate, glycerylsorbitan stearate, sucrose monostearate, sucrose monolaurate, sucrose palmitate, triglyceryl diisostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiisostearate, triglyceryl polyhydroxystearate, cetearyl isonnanoate, dicocoyl-pentaerythrityl distearyl citrate, stearic acid, oleic acid, succinic acid, hexanoic acid (carproic acid), heptanoic acid (oenanthic acid), . . .

=> d 17 cit ab 2

2. 5,858,997, Jan. 12, 1999, Method and composition for skin lightening; Brian Andrew Crotty, et al., 514/159; **424/59**; 514/844, 846, 945 [IMAGE AVAILABLE]

US PAT NO:

5,858,997 [IMAGE AVAILABLE]

L7: 2 of 14

# ABSTRACT:

A method and composition is provided for treating skin to achieve lightening by employing an active of the structure: ##STR1## wherein R is selected from the group consisting of C.sub.1 -C.sub.30 alkyl, cycloalkyl and aryl radicals. Most preferred is acetaminophen.

=> d 17 cit ab 3

3. 5,766,575, Jun. 16, 1998, Method and composition for skin lightening; Brian Andrew Crotty, et al., 424/59, 47, 60, 62 [IMAGE AVAILABLE]

US PAT NO:

5,766,575 [IMAGE AVAILABLE]

L7: 3 of 14

# ABSTRACT:

A method and composition is provided for treating skin to achieve lightening by employing an active of the structure: ##STR1## wherein R is selected from the group consisting of hydrogen, hydroxy and C.sub.1 -C.sub.30 alkyl or aryl groups radicals; and R.sup.1 is selected from the group consisting of hydrogen and C.sub.1

-C.sub.30 alkyl or aryl radicals.

=> d 17 cit ab 4

4. 5,753,210, May 19, 1998, Lotion which is temporarily colored upon application; John McEleney, et al., **424/59**, 60, 78.02, 78.03, 400, 401; 514/844, 846, 847, 937, 938, 939, 946, 947 [IMAGE AVAILABLE]

US PAT NO:

5,753,210 [IMAGE AVAILABLE]

L7: 4 of 14

#### ABSTRACT:

A lotion such as a sunscreen includes a pH indicator which colorizes the lotion until the lotion is applied to the human skin, whereinafter the colored lotion turns clear. A physiologically compatible pH indicator such as phenolphthalein is used which has a red appearance from pH 7.5+ and which has a clear appearance from about pH 7.0 to 7.5, the general pH range of the skin. The invention is suitable for use in any lotion, gel, mousse or medication that is best applied in an even and uniform manner to the skin. Accordingly, one preferred use of the invention is in UV-protecting sunscreens so that a user can ensure even distribution of the sunscreen on the body. In certain aspects of the invention, a cap houses the pH indicator and attaches to a container of the lotion, e.g., a sunscreen. The pH indicator mixes with the lotion as it is applied to the skin. The invention further provides methods of manufacturing sunscreens and the like with a pH indicator that turns substantially colorless upon prolonged contact with the skin.

=> d 17 cit ab 5

5. 5,725,882, Mar. 10, 1998, Vinyl-silicone copolymers in cosmetics and personal care products; Kanta Kumar, et al., 424/486, **59**, 63, 69, 403; 514/772.3, 844 [IMAGE AVAILABLE]

US PAT NO:

5,725,882 [IMAGE AVAILABLE]

L7: 5 of 14

# ABSTRACT:

Cosmetic compositions are provided containing vinyl-silicone graft or block copolymers of the formula ##STR1##

=> d 17 cit ab 6

6. 5,705,144, Jan. 6, 1998, Cosmetic composition containing retinol and dioic acid; Clive Roderick Harding, et al., 424/59; 514/557, 560, 574, 725, 887 [IMAGE AVAILABLE]

US PAT NO:

5,705,144 [IMAGE AVAILABLE]

L7: 6 of 14

# ABSTRACT:

A composition for topical application to human skin in order to promote the repair of photo-damaged skin and/or to reduce or prevent the damaging effects of ultra-violet light on skin and/or to lighten the skin comprising retinol or a derivative thereof and a dioic acid.

=> d 17 cit ab 7

7. 5,690,948, Nov. 25, 1997, Antisebum and antioxidant compositions containing guguliped and alcoholic fraction thereof; John Patrick McCook, et al., 424/401, **59**, 78.03, 195.1; 514/943 [IMAGE AVAILABLE]

US PAT NO:

5,690,948 [IMAGE AVAILABLE]

L7: 7 of 14

268/325, 331, 638, 660, 729 [IMAGE AVAILABLE] al., 424/59; 514/529, 549, 552, 679, 685, 721, 734; 560/220, 259;

:ON TAG 2U

L7: 10 of 14 5,545,399 [IMAGE AVAILABLE]

lightening skin lightening agents, particularly retinol or derivatives Optional additional ingredients include sunscreens and other skin different, represent H or --COR (where R is as herein before defined). R. sub.4, R. sub.5, R. sub.6 and R. sub.7, which may be the same or represent H, --OH, --OR or --COR (where R is a C.sub.1-20 alkyl group); R.sub.1, R.sub.2 and R.sub.3, which may be the same or different, comprising a hydrocalchone of general structure: ##STR1## wherein effects of ultra-violet light on skin and/or to lighten the skin repair of photo-damaged or aged skin and/or to reduce or prevent damaging A composition for topical application to the skin in order to promote the :TDAATZAA

₽1 10 OE 14 5,545,399 [IMAGE AVAILABLE]

PROCENTIES (154) 276 (158) 248, 351, 638, 660, 729 (159) 151, 734;

AAAA Octyl salicylate стиизшир Bernel Chemical

S-Phenyl- EUSOLEX 232

EM Industries

National Starch

Lefton Worldwide

Eelton Worldwide

BASF Chemical.

Em Industries

particles. Examples of such materials include aluminium oxide and. with a material to impart a hydrophilic surface property to the dioxide, the particles of which are uncoated or which are coated

Water-dispersible titanium dioxide is ultrafine titanium

namely water-dispersible titanium dioxide and oil-dispersible as a sunscreen ultrafine titanium dioxide in either of two forms,

The composition according to the invention optionally can also comprise

SUNAROME WMO

UVINUL 400

ENZOFEX 0300

SUNAROME W

BSUM(32)

: YAAMMU2

BSUM (35)

: YAAMMU2

BSUM(34)

:YAAMMUS

geusobyeuoue-T lidene)-camphor

TEA salicylate biss sinonqlus-2 -9Lozabimiznad

3-(4-methylbenzy-

titanium dioxide.

:YAAMMUS

Oil-dispersible titanium dioxide is ultrafine titanium dioxide, the particles of which exhibit a hydrophobic surface property, and which, for this purpose, can be coated with metal soaps such as aluminium stearate, aluminium laurate or zinc stearate, or with organosilicone compounds.

#### SUMMARY:

BSUM(37)

By "ultrafine titanium dioxide" is meant particles of titanium dioxide having an average particle size of less than 100 nm, preferably from 10 to 40 nm and most preferably from. . .

# SUMMARY:

BSUM (38)

By topical application to the skin of a mixture of both water-dispersible ultrafine **titanium dioxide** and oil-dispersible ultrafine **titanium dioxide**, synergically enhanced protection of the skin against the harmful effects of both UV-A and UV-B rays is achievable.

### SUMMARY:

BSUM(39)

It is believed that this unexpected benefit is due to the deposition of each type of **titanium dioxide** on different regions of the skin surface, water-dispersible **titanium dioxide** being preferentially retained by hydrophilic regions of the skin's surface, while oil-dispersible **titanium dioxide** is retained preferentially by hydrophobic regions of the skin's surface. The combined overall effect is that more efficient physical coverage of the skin's surface is.

## SUMMARY:

BSUM (40)

In order to achieve the enhanced, synergistic benefit, as herein described, the weight ratio of water-dispersible **titanium dioxide** to oil-dispersible **titanium dioxide** should be from 1:4 to 4:1, preferably from 1:2 to 2:1 and ideally about equal weight proportions.

## SUMMARY:

BSUM (41)

The total amount of titanium dioxide that can optionally can be incorporated in the composition according to the invention is from 1 to 25%, preferably from. . .

# SUMMARY:

BSUM(42)

The compositions of the invention optionally can comprise an inorganic sunscreen in addition to ultrafine **titanium dioxide** as herein defined.

### SUMMARY:

```
BSUM (44)
 zinc oxide, having an average particle size of from 1 to 300 nm,
 DETDESC:
DETD (16)
 Ingredient
                       8 W/W
dihydrophloretin
                       2.0
silicone surfactant
                       10
volatile siloxane
                       14
mineral oil
                       1.5
titanium dioxide (water-dispersible)
titanium dioxide (oil-dispersible)
2-hydroxyoctanoic acid
2-hydroxypropanoic acid
butylene glycol
                       10
sodium chloride
                       2
1-proline
                       0.1
neutralising. .
DETDESC:
DETD(19)
silicone surfactant (DC 3225C)
                        12
petroleum jelly
                        0.5
mineral oil
                        1.5
Parsol MCX (octyl methoxycinnamate)
titanium dioxide (oil-dispersible)
titanium dioxide (water-dispersible)
                        2
sodium chloride
                        2
butylene glycol
                        10
1-proline
                        0.1
2-hydroxyoctanoic acid 1
2-hydroxypropanoic acid
neutralising agent.
DETDESC:
DETD (22)
silicone surfactant (DC 3225C)
                         12
mineral oil
                         1.5
petroleum jelly
                         0.5
Parsol MCX (octyl methoxycinnamate)
                         1.5
titanium dioxide (oil-dispersible)
```

titanium dioxide (water-dispersible)

```
2-hydroxyoctanoic
2-hydroxypropanoic acid 5
sodium chloride
                        10
butylene glycol
                        0.1
1-proline
neutralising agent (aqueous.
DETDESC:
DETD (26)
dihydrophloretin
silicone surfactant (DC 3225C)
                       10
volatile siloxane (DC 345)
                       14
mineral oil
                       1.5
Parsol MCX
                       3
titanium dioxide (oil-dispersible)
titanium dioxide (water-dispersible)
                       2
butylene glycol
                       10
sodium chloride
                       2
1-proline
2-hydroxyoctanoic acid 1
2-hydroxypropanoic acid
neutralising agent.
```

# DETDESC:

DETD (29)

Ingredients	% w/w
retinyl acetate	0.2
retinyl laurate	0.2
dihydrophloretin	0.5
cetyl dimethicone copolyol	Ļ
cetyl dimethicone	*
polyglyceryl-3-oleate	5
hexyl laurate	
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (water-di	ispersible)
	2.5
titanium dioxide (oil-disp	persible)
_	2.5
water	to 10

<sup>\*</sup>available is ABIL W508 ex Goldschmidt

=> d 17 cit ab 11

11. 5,486,353, Jan. 23, 1996, Antisun product; Mario Billia, et al., 424/59, 60, 62; 514/21 [IMAGE AVAILABLE]

L7: 11 of 14

5,486,353 [IMAGE AVAILABLE] US PAT NO:

ABSTRACT:

An antisun product which contains, besides cosmetic auxiliaries and sunscreen agents and/or sun blocks, an effective amount of deproteinated haemodialysate of mammalian blood or an active fraction thereof results in improving the condition of the skin and in reducing or avoiding the adverse effects of exposure to the sun. The composition is suitable for both prophylaxis and aftercare.

=> d 17 kwic 11

US PAT NO: 5,486,353 [IMAGE AVAILABLE] L7: 11 of 14 US-CL-CURRENT: 424/59, 60, 62; 514/21

SUMMARY:

BSUM(17)

Sun blocks which are suitable are customary inorganic substances and pigments such as kaolin, zinc oxide, talc, bentonire, calcium carbonate, magnesium oxide, titanium dioxide, iron oxide, magnesium silicate, pearl mica and the like. They reflect and scatter sunlight in the ultraviolet, visible and infrared. . .

# SUMMARY:

BSUM(19)

In accordance with a particularly preferred embodiment, the antisun products according to the invention contain zinc oxide and/or titanium dioxide as sun blocks. These are non-irritant and, in particular, provoke no allergic responses in the eye and on the lips, thus allowing optimal sun protection for the entire body. The particle size of titanium dioxide is preferably less than 35 .mu.m, particularly preferably less than 10 .mu.m, and the particle size of the zinc oxide is preferably less than 50 .mu.m, particularly preferably less than 20 .mu.m. Such micropigments and their use are disclosed, for. . .

## SUMMARY:

BSUM (20)

Substances . . . N-substituted p-aminobenzoic acid derivatives, camphor derivatives, cinnamates and benzimidazol derivatives. Examples of suitable compounds are glyceryl p-aminobenzoate, isoamyl p-dimethylaminobenzoate, 2-hydroxy-4-octyloxybenzophenone, 2-hydroxy-4-methoxybenzophenone-5-sulphonic acid trihydrate, 2-ethylhexyl 4-phenylbenzophenone-2'-carboxylate, 4-phenylbenzophenone, 2-hydroxy-4-methoxybenzophenone, 2,2'-dihydroxy-4,4'-dimethoxybenzophenone, 2,2'-dihydroxy-4,4'-dimethoxybenzophenone, sodium 2,2'-dihydroxy-4,4'-dimethoxybenzophenone-5-sulphonate, propyl p-methoxycinnamate, 2-ethoxyethyl p-methoxycinnamate, 2-ethylhexyl p-methoxycinnamate, isoamyl p-methoxycinnamate, the diethanolamine salt of p-methoxycinnamic acid, sodium 3,4-dimethoxyphenylglyoxylate, 2-phenylbenzimidazol-5-sulphonic acid, 5-methyl-2-phenylbenzoxazol, 3-(4-methylbenzylidene)camphor, dibenzalazine, 5-(3,3-dimethyl-2-norbornylidene)-3-penten-2-one, dianisoylmethane and the like. Due to their structure, for example a sufficient number of conjugated double. . .

SUMMARY:

BSUM (23)

```
In . . . a projective film, antiinflammatory compenents, components having a bacterios tic or fungicidal activity, odo ferous components
                                                           nents, components
 (in particular perfumes), components which improve water
resistance, salts (for example sodium chloride), vitamins and/or
pigments. A person skilled in the art is also thoroughly familiar with
such.
DETDESC:
DETD(4)
7.5
Mineral oil
                             5
Octyl stearate
                             3
Propylene glycol
                             2.25
Cetyldimethicone copolyol 2
1-(4-Methoxyphenyl)-3-(4-tert-butylphenyl)-
propane-1, 3-dione
3-(4-Methylbenzylidene)camphor
Polyglyceryl-4 isostearate
2-Hydroxy-4-methoxybenzophenone
                             0.5
Fragrances
                            0.5
Sodium chloride
                            0.3
EDTA
                            0.2
Methylparaben
                            0.175
Propylparaben
                            0.075
DETDESC:
DETD(9)
 Sun protection lotion with zinc oxide and a sun protection
factor of 15 composed of:
DETDESC:
DETD (10)
                          % by weight
Water
                            34.2
Zinc oxide
                            20
Haemodialysate (dry matter content: 40 mg/ml)
                            19
Cetyldimethicone copolyol/hexyl laurate
C.sub.8 -C.sub.10 -Fatty acid glycerides
DETDESC:
DETD (12)
Sun protection cream (water-in-oil) with zinc oxide and
titanium dioxide and a sun protection factor of 10 composed of:
DETDESC:
```

DETD (13)

# % by weight

Water 55.9 Haemodialysate (dry matter content: 40 mg/ml) 10 Zinc oxide 10 Mineral oil Isopropyl palmitate 3.5 Methylglucoside dioleate 3 Methylgluceth-20 Titanium dioxide Propylene glycol 2.5 PEG-45/dodecyl glycol copolymer Mineral oil and aluminium magnesium hydroxystearate C38 liquid.

# CLAIMS:

## CLMS(5)

5. The antisun product according to any of claim 1, characterized in that it contains **zinc oxide**, **titanium dioxide**, kaolin, talc, bentonitc, calcium carbonate, magnesium oxide, iron oxide, magnesium silicate and/or pearl mica as sun block.

# CLAIMS:

### CLMS (6)

6. The antisun product according to any of claims 1, characterized in that it contains one or more micropigments, preferably zinc oxide having a particle size of less than 50 .mu.m and/or titanium dioxide having a particle size of less than 35 .mu.m as sun blocks.

=> d 17 cit ab 12

12. 5,244,665, Sep. 14, 1993, Cosmetic composition; Collur V. Natraj, et al., 424/401, **59**; 514/785 [IMAGE AVAILABLE]

US PAT NO:

5,244,665 [IMAGE AVAILABLE]

L7: 12 of 14

# ABSTRACT:

A composition suitable for topical application to human skin for reducing the damaging effects of ultra-violet light on skin comprises:

- (a) an effective amount of a triester of citric acid having the structure (1): ##STR1## where R.sup.1, R.sup.2, and R.sup.3 each independently represent a branched or unbranched alkyl, alkenyl, aryl, alkylaryl or arylalkyl group, each said group being optionally substituted and having from 1 to 18 carbon atoms,
- R.sup.4 represents --H, or a branched or unbranched saturated or unsaturated acyl, alkyl, aryl, alkylaryl or arylalkyl group, each said group being
- optionally substituted and having from 1 to 18 carbon atoms; and
- (b) a cosmetically acceptable vehicle for the citric acid ester; and
- (c) an effective amount of a sunscreen agent, with the proviso that in the case where the sunscreen agent is an inorganic sunscreen, it has an average particle size of less than 100 .mu.m.

US PAT NO: 5,24

5,244,665 [IMAGE AVAILABLE]

US-CL-CURRENT: 424/401, 59; 514/785

SUMMARY:

BSUM(58)

MCX Bernel Chemical Octyl salicylate SUNAROME WMO

Felton Worldwide

ABA PABA

National Starch

2-Phenyl-benzimidazole-

EUSOLEX 232 EM Industries

5-sulphonic acid

TEA salicylate SUNAROME W Felton Worldwide 3-(4-methylbenzylidene)-camphor EUSOLEX 6300

EM Industries

Benzophenone-1 UVINUL 400 BASF Chemical Co.

Benzophenone-2. .

SUMMARY:

BSUM (61)

The sunscreen agent according to the invention can optionally comprise an inorganic sunscreen, such as ultrafine titanium dioxide in either of two forms, namely water-dispersible titanium dioxide and oil-dispersible titanium dioxide.

SUMMARY:

BSUM (62)

Water-dispersible titanium dioxide is ultrafine titanium dioxide, the particles of which are uncoated or which are coated with a material to impart a hydrophilic surface property to the particles. Examples of such materials include aluminium oxide and.

SUMMARY:

BSUM (63)

Oil-dispersible titanium dioxide is ultrafine titanium dioxide, the particles of which exhibit a hydrophobic surface property, and which, for this purpose, can be coated with metal soaps such as aluminium stearate, aluminium laurate or zinc stearate, or with organosilicone compounds.

SUMMARY:

BSUM (64)

By "ultrafine titanium dioxide" is meant particles of titanium dioxide having an average particle size of less than 100 nm, preferably 70 nm or less, more preferably from 10 to.

SUMMARY:

BSUM (65)

By topical application to the skin of a mixture of both water-dispersible ultrafine **titanium dioxide** and oil-dispersible

ultrafine titanium lioxide, synergistically enhance protection of the skin again the harmful effects of both UV and UV-B rays is achievable. SUMMARY: BSUM (66) It is believed that this unexpected benefit is due to the deposition of each type of titanium dioxide on different regions of the skin surface, water-dispersible titanium dioxide being preferentially retained by hydrophilic regions of the skin's surface, while oil-dispersible titanium dioxide is retained preferentially by hydrophobic regions of the skin's surface. The combined overall effect is that more efficient physical coverage of the skin's surface is. SUMMARY: BSUM (67) In order to achieve the enhanced, synergistic benefit, as herein described, the weight ratio of water-dispersible titanium dioxide to oil-dispersible titanium dioxide should be from 1:4 to 4:1, preferably from 1:2 to 2:1 and ideally about equal weight proportions. SUMMARY: BSUM (68)

The total amount of **titanium dioxide** that can optionally can be incorporated in the composition according to the invention is from 1 to 25%, preferably from. . .

SUMMARY:

BSUM (70)

The emulsion of the invention optionally can comprise an inorganic sunscreen in addition to ultrafine **titanium dioxide** as herein defined. Preferably the inorganic sunscreen has an average particle size of less then 70 nm, preferably from 10. . .

SUMMARY:

BSUM (71)

Examples of other inorganic sunscreens include: **zinc oxide**, iron oxide, and silica, such as fumed silica, having an average particle size of less than 100 nm, typically from. . .

DETDESC:

DETD(2)

The invention is further illustrated by the following examples; in each formulation, the **titanium dioxide** employed was ultrafine **titanium dioxide** having a mean particle size of from 15 to 25 nm.

DETDESC:

DETD(5)

Ingredient

8 W/W

```
tri-n-butyl citra
 silicone surfactant
                        10
 volatile siloxane
                        14
 mineral oil
                       1.5
 titanium dioxide (water-dispersible)
                       2.5
 titanium dioxide (oil-dispersible)
                       2.5
 2-hydroxy octanoic acid
 2-hydroxy propanoic acid
butylene glycol
                       10
 sodium chloride
                       2
1-proline. . .
DETDESC:
DETD(8)
silicone surfactant (DC 3225C)
                         12
petroleum jelly
                         0.5
mineral oil
Parsol MCX (octyl methoxycinnamate)
titanium dioxide (oil-dispersible)
titanium dioxide (water-dispersible)
sodium chloride
butylene glycol
1-proline
2-hydroxy octanoic acid 1
2-hydroxy propanoic acid
DETDESC:
DETD (11)
silicone surfactant (DC 3225C)
mineral oil
                         1.5
petroleum jelly
                         0.5
Parsol MCX (octyl methoxycinnamate)
                         1.5
titanium dioxide (oil-dispersible)
                         1.0
titanium dioxide (water-dispersible)
2-hydroxyoctanoic acid 1
2-hydroxypropanoic acid 5
sodium chloride
butylene glycol
                         10
1-proline
                         0.1
neutralising agent (aqueous.
DETDESC:
DETD(14)
```

• . • •

```
citrate
silicone surfacta
                     (DC 3225C)
                      10
volatile siloxane (DC 345)
                      14
mineral oil
                       1.5
Parsol MCX
titanium dioxide (oil-dispersible)
titanium dioxide (water-dispersible)
butylene glycol
                      10
sodium chloride
1-proline
                      0.1
2-hydroxy octanoic acid
2-hydroxy propanoic acid
DETDESC:
DETD (17)
cetyl alcohol
                       1.5
soft white paraffin
                       1.5
silicone fluid 200
                       5
liquid paraffin
                       8
glycerin
                       0.5
preservatives
titanium dioxide (water-dispersible)
                       2.5
titanium dioxide (oil-dispersible)
                       2.5
water
                       to 100
DETDESC:
DETD(20)
```

Ingredients	% w/w
triethyl citrate	2
tri-n-butyl citrate	2
cetyl dimethicone cop	olyol
cetyl dimethicone	
polyglyceryl-3-oleate	* 5
hexyl laurate	
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (Wat	er-dispersible)
	2.5
titanium dioxide (oil	-dispersible) 2.5
water	to 100

<sup>\*</sup>Available is ABIL W508 ex Goldschmidt

DETDESC:

DETD (23)

---- (--,

2-acetyl tri-n-butyl citrate
2
silicone surfactant 10
volatile siloxane 14
mineral oil 1.5
ultrafine titanium dioxide
5
(water-dispersible)
2-hydroxy octanoic acid
1
2-hydroxy propanoic acid
5
butylene glycol 5
sodium chloride 2
amino. . .

DETDESC:

DETD (26)

Ingredient

% W/W

2-0-ethyl tri-n-butyl citrate
3
silicone surfactant 10
volatile siloxane 14
mineral oil 1.5
ultrafine titanium dioxide
5

butylene glycol 10 sodium chloride 2 amino. . .

DETDESC:

DETD (29)

Ingredient % w/w

tridodecyl citrate 1
silicone surfactant 10
volatile siloxane 14
mineral oil 1.5
ultrafine titanium dioxide
2.5

(water-dispersible)

ultrafine **titanium dioxide** 2.50

(oil-dispersible)

2-hydroxy octanoic acid

2-hydroxy propanoic acid 5

butylene glycol 10 sodium chloride 2

40 4160. 4

•

-

1

CLAIMS:

CLMS(7)

7. A composition according to claim 6 wherein the inorganic sunscreen comprises a mixture of water-dispersible and oil-dispersible titanium dioxide.

CLAIMS:

CLMS(8)

8. A composition according to claim 7 wherein the **titanium dioxide** has a mean particle size of from 15 to 25 nm.

=> d 17 cit ab 13

13. 5,188,831, Feb. 23, 1993, Sunscreens containing both water and oil dispersible **titanium dioxide** particles; Gregg A. Nicoll, et al., 424/401, **59**, 63, 69 [IMAGE AVAILABLE]

US PAT NO:

5,188,831 [IMAGE AVAILABLE]

L7: 13 of 14

#### ABSTRACT:

A composition for topical application to human skin to provide protection from excessive exposure to ultra-violet rays, comprises an effective amount of a sunscreen comprising water-dispersible ultrafine titanium dioxide and oil-dispersible ultrafine titanium dioxide, together with a cosmetically acceptable vehicle for the sunscreen.

=> d 17 cit ab 14

14. 4,529,587, Jul. 16, 1985, Method of reducing sebum on the hair and skin; Martin R. Green, 424/70.8, 47, **59**, 60, 65, 67, 68, DIG.4; 514/387, 769, 770, 778, 781, 784, 846 [IMAGE AVAILABLE]

US PAT NO:

4,529,587 [IMAGE AVAILABLE]

L7: 14 of 14

#### ABSTRACT:

A cosmetically acceptable composition for topical application to human skin or hair in order to reduce greasiness comprises, at a concentration of from 0.0001M to 0.5M, a biotin antagonist which is capable of blocking the activity of the biotin dependent enzyme acetyl-SCoA-carboxylase implicated in sebum production; together with a carrier other than water as an aid to delivering the biotin antagonist to the sebaceous gland.

SN 08/987,468 5725799

Trying 01182...Open

PLEASE ENTER HOST PORT ID: PLEASE ENTER HOST PORT ID:x LOGINID:d150mxl SYSTEM BUSY

Connection closed by remote host Trying 9351006...Open

Welcome to STN International! Enter x:x
LOGINID:sssptal616mxl
PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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SINCE FILE TOTAL ENTRY SESSION 0.15 0.15

COST IN U.S. DOLLARS
FULL ESTIMATED COST

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FILE 'KOSMET' ENTERED AT 15:38:19 ON 25 MAY 1999 COPYRIGHT (C) 1999 International Federation of the Societies of Cosmetics Chemists

=> s sunscreen? or UV filter? or UV absorb?

28102 SUNSCREEN? OR UV FILTER? OR UV ABSORB? L1

=> s l1 and (polyglyceryl (2a) ?stearate or isolan CI or lameform TGI or hostacerin DGI or dehymuls pgph)

LEFT TRUNCATION IGNORED FOR '?STEARATE' FOR FILE 'USPATFULL' LEFT TRUNCATION IGNORED FOR '?STEARATE' FOR FILE 'KOSMET' 35 L1 AND (POLYGLYCERYL (2A) ?STEARATE OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHYMULS PGPH)

Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

=> s 11 and ((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiisostearate or polyhyroxystearate or myristate or palmitate) or isolan CI or lameform TGI or hostacerin DGI or dehymuls pgph)

UNMATCHED LEFT PARENTHESIS 'AND ((POLYGLYCE' The number of right parentheses in a query must be equal to the number of left parentheses.

=> s ll and (((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiisostearate or polyhyroxystearate or myristate or palmitate) or isolan CI or lameform TGI or hostacerin DGI or dehymuls pgph)

UNMATCHED LEFT PARENTHESIS 'AND (((POLYGLYCE' The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and (((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiisostearate or polyhyroxystearate or myristate or palmitate)) or isolan CI or lameform TGI or hostacerin DGI or dehymuls pgph)

UNMATCHED LEFT PARENTHESIS 'AND ((' The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and ((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiisostearate or polyhyroxystearate or myristate or palmitate)) or isolan CI or lameform TGI or hostacerin DGI or dehymuls pgph)

L3 66 L1 AND ((POLYGLYCERYL (2A) (ISOSTEARATE OR DIISOSTEARATE OR STEARATE OR SESQUIISOSTEARATE OR POLYHYROXYSTEARATE OR

MYRISTATE

OR PALMITATE)) OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHYMULS PGPH)

=> s 13 and ((hydrophobic? (2a) (inorganic pigment? or titanium dioxide or zinc oxide or tio2 or zno) or tioveil or t 805 or mt 100t or m 160)

UNMATCHED LEFT PALE HESIS 'AND ((HYDROPHOB'
The number of right parentheses in a query must be equal to the number of left parentheses.

=> s 13 and ((hydrophobic? (2a) (inorganic pigment? or titanium dioxide or zinc oxide or tio2 or zno)) or tioveil or t 805 or mt 100t or m 160)

4 L3 AND ((HYDROPHOBIC? (2A) (INORGANIC PIGMENT? OR TITANIUM DIOXIDE OR ZINC OXIDE OR TIO2 OR ZNO)) OR TIOVEIL OR T 805 OR MT 100T OR M 160)

=> dup rem 14

DUPLICATE IS NOT AVAILABLE IN 'KOSMET'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE PROCESSING COMPLETED FOR L4

L5 4 DUP REM L4 (0 DUPLICATES REMOVED)

=> d 15 bib ab

```
L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 1999 ACS
AN 1998:398181 CAPLUS
DN 129:71941
TI Sunscreen compositions containing surface-active mono- or oligoglyceryl compounds, sulfonated water-soluble uv filters, and optional inorganic micropigments
IN Gers-Barlag, Heinrich; Mueller, Anja
PA Beiersdorf A.-G., Germany
```

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW
DT Patent

LA German

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE ----- ----EP 847750 A2 19980617 EP 847750 A3 19980715 ΡI EP 97-120617 19971125 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO DE 19651478 A1 19980618 DE 96-19651478 19961211 JP 10175839 A2 19980630 JP 97-356340 19971210 PRAI DE 96-19651478 19961211

OS MARPAT 129:71941

Title sunscreen compns., contg. surfactants
R10[CH2CH(OR2)CH20]kR3 [k = 1-8; R1-R3 = H (provided .gtoreq.1 of R1-R3 .noteq. H), aliph. acyl, aliph. C8-24 acyl bearing .ltoreq.3 OH groups, polyester C(O)R4CHR5(O2CR4CHR5)bO2CR4CHR5OH (R4 = C1-20 alkylene; R5 = C1-20 alkyl; b = 0-200)], are waterproof and photostable, and provide improved sun protection factors,. Thus, a sunscreen compn. contained polyglyceryl-4 isostearate 3.00, caprylic/capric triglyceride 5.00, octyldodecanol 5.00, dicaprylyl ether 1.67, benzene-1, 4-bis(2-oxo-3-bornylidenemethyl-10-sulfonic acid) 4.00, hydrophobic TiO2 5.00, glycerin monostearate 2.00, glycerin 3.00, tocopheryl acetate 1.00, NaOH for pH adjustment, perfume, preservative, and H2O to 100.00 wt.%.

=> d 15 bib ab 2

L5 ANSWER 2 OF 4 USPATFULL

AN 96:116102 USPATFULL

TI Use of benzazoles **UV absorbers**, new benzazoles and a process for their preparation

```
IN
       Pelzer, Ral
                    Furstenberg, Germany, Federal
                                                      ublic of
       Langner, R
                     d, Bevern, Germany, Federal Re
                                                      lic of
       Surburg, Horst, Holzminden, Germany, Federal Republic of
       Sommer, Horst, Holzminden, Germany, Federal Republic of
       Krempel, Alfred, Holzminden, Germany, Federal Republic of
       Hopp, Rudolf, Holzminden, Germany, Federal Republic of
PA
       Haarmann & Reimer GmbH, Holzminden, Germany, Federal Republic of
       (non-U.S. corporation)
PΤ
       US 5585091 19961217
       US 95-391853 19950222 (8)
AΙ
       DE 94-4406024 19940224
PRAI
       DE 94-4409689 19940322
DΤ
       Utility
EXNAM Primary Examiner: Ivy, C. Warren; Assistant Examiner: Huang, Evelyn
LREP
       Sprung Horn Kramer & Woods
CLMN
       Number of Claims: 5
ECL
       Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 929
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compounds which, per molecule, contain at least 2 benzazolyl groups are
       outstandingly suitable as uv absorbers for
     sunscreen compositions.
=> d 15 kwic 2
    ANSWER 2 OF 4 USPATFULL
L5
ТT
      Use of benzazoles UV absorbers, new benzazoles and a
       process for their preparation
AB
       Compounds which, per molecule, contain at least 2 benzazolyl groups are
       outstandingly suitable as UV absorbers for
     sunscreen compositions.
SUMM
       . . . the use of compounds which, per molecule, contain at least two
      benzazolyl radicals, e.g. at least two benzimidazol-2-yl radicals, as
    UV absorbers in sunscreen compositions,
       additionally new benzazoles and a process for their preparation by
       reaction of difunctional anilines with reactive carboxylic acid
      derivatives.
SUMM
      According to the position of their absorption maxima, uv
     absorbers for cosmetic and dermatological preparations are
      divided into UV-A and UV-B absorbers.
SUMM
       . . . can lead to problems in the formulation of cosmetic
      preparations. The absorption maximum lies in the less hazardous UV-A-I
       range. Sunscreen products containing dibenzoylmethane
      derivatives can additionally leave behind on textiles spots which are
      extremely difficult to wash out. It is.
SUMM
      In DRP-676 103, the sodium salt of phenylbenzimidazolesulphonic acid
       (absorption maximum: 316 nm) and similar compounds are recommended as
    UV absorbers in sunscreen compositions for
      the human skin. The compounds described, however, do not have the
      desired photostability or the desired absorption maximum.
SUMM
         . . can also be stably formulated with a low pH (up to pH 4)
      without crystallization occurring. Preparations having a high UV
    absorber content (for example up to 20% by weight) are possible.
      It is noticeable that on addition of a base until.
SUMM
      The invention thus relates to the use of compounds which, per molecule,
      contain at least two benzazolyl groups, as uv
    absorbers in sunscreen compositions, preferably in
      cosmetic and dermatological preparations.
      The compounds to be used according to the invention can be used as
    uv absorbers in cosmetic or dermatological
      preparations in amounts which prevent the passage of the UV rays
through
      the film of the. . .
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SUMM
        The compour
                     to be used according to the in
                                                       ntion can be employed in
        the corres
                      ling preparations as the only {f v}
                                                       absorber
        ; but they can also be employed in combination with other uv
     absorbers--in particular UV-B absorbers, to achieve a UV-A+B
       wide-spectrum absorption or, with poorly photostable dibenzoylmethane
        derivatives (e.g. butyl-methoxydibenzoyl-methane or 4-isopropyl-
       dibenzoylmethane), for.
DETD
       Sunscreen milk (O/W)
       Lameform TGI: triglyceryl diisostearate, supplier 3
DETD
       Tioveil MOTG: 40% strength by weight aqueous dispersion of
DETD
       titanium dioxide, supplier 20
DETD
       Sunscreen lotion (O/W)
DETD
       A 20% strength preliminary solution, neutralized with sodium hydroxide,
       was prepared from the UV absorber according to
       formula (I). 15% of this solution was employed, which corresponds to an
       active content of 3.00% of UV-A.
DETD
       Sunscreen cream (O/W)
DETD
       Sunscreen cream (O/W)
DETD
       Sunscreen milk (W/O)
DETD
Constituents
     Lameform TGI
                                4.00
     Dehymuls HR E 7
                                4.00
     Cetiol S
                                12.00
     Liquid paraffin 65 cp
                                8.50
     Permulgin 3220
                                1.00
     Isooctyl p-methoxycinnamate
                                5.00
       Sunscreen lotion (W/O)
DETD
       . . . 9
DETD
                             1.00
       Elfacos C 26
                               1.00
       Liquid paraffin 65 cp
                               6.00
       Isopropyl diisostearate 7.00
       Isooctyl p-methoxycinnamate
                               7.00
       Octyl salicylate
                               5.00
       Tioveil MOTG, 40% strength dispersion
                               12.50
B)
       Water, dist.
                               43.40
       Trilon B liq.
                               0.30
       86% Glycol
                               3.00
       Phenonip
                               0.50
       UV-A absorber according.
DETD
       Sunscreen cream (W/O)
DETD
       Sunscreen lotion (W/O)
DETD
       Sunscreen hydrodispersion gel, emulsifier-free
DETD
       Sunscreen gel
DETD
       Part C: Add the sunscreen filter solutions to the gel part A/B
       with stirring.
DETD
       Sunscreen spray, non-aerosol
DETD
       Hair shampoo containing sunscreen
DETD
      Hair gel containing sunscreen
DETD
      Leave-on hair treatment, transparent, containing sunscreen
CLM
      What is claimed is:
       1. In a sunscreen composition containing a uv
     absorber, the improvement wherein such uv
     absorber has its absorption maximum in the UV-A range, and per
      molecule contains at least two benzazolyl groups and at least.
      2. A sunscreen composition according to claim 1, wherein the
    UV absorber is of the formula ##STR47## in which Z is
      a (n+p)-valent organic radical having one or more double bonds in.
      m is 0 or 1, n is an integer from 2 to 6, and n+p is at most 6, the
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- 3. A sunscreen composition according to claim 2, in which Z is a) an olefinically unsaturated aliphatic C.sub.2 -C.sub.6 -hydrocarbon radical which can. . .
- 4. A sunscreen composition according to claim 2, in which Z is selected from the group consisting of --CH.dbd.CH--, --CH.dbd.CH--CH.dbd.CH--, ##STR48## phenylene, biphenylene,.
- 5. A sunscreen composition according to claim 4, in which X is NR.sup.6.

#### => d 15 bib ab 3

ANSWER 3 OF 4 USPATFULL AN 94:35363 USPATFULL ΤI Suncare compositions IN Robinson, Larry R., Oxford, CT, United States Rinaldi, Marie A., Hamden, CT, United States Gupte, Anil J., Seymour, CT, United States Richardson-Vicks Inc., Shelton, CT, United States (U.S. corporation) PAUS 5306485 19940426 PΙ US 93-16341 19930211 (8) ΑI Continuation of Ser. No. US 91-696817, filed on 7 May 1991, now RLI patented, Pat. No. US 5207998 DΤ Utility EXNAM Primary Examiner: Ore, Dale R. LREP Sabatelli, Anthony D.; Dabbiere, David K. CLMN Number of Claims: 20 ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 978

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are sunscare compositions having enhanced substantivity, efficacy and the like for protecting the skin from the harmful effects of ultraviolet irradiation, such as sunburn and sun-induced premature aging of the skin.

# => d 15 bib ab 4

aging of the skin.

ANSWER 4 OF 4 USPATFULL  $L_5$ ΑN 93:35451 USPATFULL Suncare compositions ΤI IN Robinson, Larry R., Oxford, CT, United States Rinaldi, Marie A., Hamden, CT, United States Gupte, Anil J., Seymour, CT, United States PΑ Richardson-Vicks Inc., Shelton, CT, United States (U.S. corporation) PΙ US 5207998 19930504 US 91-696817 19910507 (7) ΑI DΤ Utility Primary Examiner: Ore, Dale R. EXNAM LREP Sabatelli, Anthony D.; Dabbiere, David K.; Goldstein, Steven J. CLMN Number of Claims: 20 ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 958 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Disclosed are sunscare compositions having enhanced substantivity, efficacy and the like for protecting the skin from the harmful effects

of ultraviolet irradiation, such as sunburn and sun-induced premature